

## **CAREER SATISFACTION AND PSYCHOLOGICAL WELL-BEING AMONG PROFESSIONAL ENGINEERS IN MALAYSIA: THE EFFECT OF CAREER GOAL DEVELOPMENT**

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### **ABSTRACT**

*As fast-track individuals with special knowledge and expertise, engineers have great expectations and ambitions for their careers and are known for striving for psychological success and climbing the career ladder. Nevertheless, several factors have influenced the well-being of engineers, including conflicts between personal goals and expectations with available advancement opportunities, work autonomy, and work demand. As a result, engineers in Malaysia are considered to be unhappy workers. This scenario will likely worsen if little attention is given to researching the engineer's individual well-being. Thus, it is appropriate to conduct a study that assesses the level of individual well-being among Malaysian engineers using career goal development as a predictor. This study applied a self-administered questionnaire to collect data. A total of 500 questions were distributed to registered professional engineers, and 387 completed questionnaires were returned for analysis. The measures used in the study were adopted from previous studies with acceptable reliabilities, and the research hypotheses were investigated through correlation and path analysis using PLS. The research findings have provided useful information on the positive influence of protean career orientation on psychological well-being. Furthermore, the results showed that career goal development has a positive influence on individual well-being. The implications of these findings contribute to the understanding of the process through which career attitude affects individual well-being, which will be discussed.*

**Keywords:** career goal development, career satisfaction, psychological well-being, engineers

### **INTRODUCTION**

Individuals' careers in the contemporary business world are influenced by changes in the nature of work (Greenhaus, Callanan, & Godshalk, 2000). Organisations are becoming flatter as a result of work that is increasingly flexible. Additionally, the boundaries of career landscapes have become wider

(Arthur, Inkson, & Pringle, 1999). For this reason, employees need to change their attitudes towards career development (Briscoe & Hall, 2006). Employees who adapt to these labour markets and structural changes in organisations will also have to modify their work values and behaviours (Hall, 2004). Individuals also need to bear most of the responsibility for planning and managing their careers. Hall (2002) concluded that the potential of a new career is that the individual must develop new competencies related to the management of themselves and their career (Eby, Butts, & Lockwood, 2003; Hall & Moss, 1998). The competency individuals need to obtain is the ability to identify personal career goals, which is a phenomenon called career goal development. The behavioural component of career goal development is within the control of the individual and builds on the notion of proactivity, which refers to the concrete actions undertaken by employees to realise their career goals. This action can focus on improving one's current job prospects within or outside of the company (Kosseck, Roberts, Fisher, & Demarr, 1998).

Like other employees, an engineer's key performance areas are structured by organisations according to business needs, increases in productivity, and changes in the workplace. The key performance areas has become an integral part of the engineer's working life (Malan, 2004). Engineers need to be competent in several areas including coordinating technical teams, negotiating complex nonlinear systems, and solving problems. For example, according to Trevelyan (2007), a key attribute of effective engineers is the ability to work with and influence other employees so that they conscientiously perform all necessary work in accordance with a mutually agreed schedule. Trevelyan's (2007) emphasis on technical coordination is echoed in the findings of other works that also stress the importance of effective communication. In a study that compared the design work of engineering professionals, researchers found that engineers gathered more information in more categories as they defined and scope of the problem. They also found that engineers are more careful when considering the context and constraints of a problem. Abdull Rahman (2012) found that engineers provided major contributions to Malaysia's economic development. This is attributed to their role as key players in many industries such as construction, manufacturing, and agriculture. According to Muthuveloo and Che Rose (2005), engineers add value through the use of appropriate technology and processes. For example, besides catching up with technology, shortening design cycles, and computerising designs, engineers also have to cope with the demand that arises from the nature of their work. Engineers need to be equipped with ways to build and capitalise on their strength in order to maintain excellent performance for work. Table 1 represents the Gross Domestic Product (GDP) of Malaysia by sectors from 2012 to 2014, which underlines the significant contribution of the construction, manufacturing, and agriculture industries to GDP growth.

Table 1  
*Malaysia: Gross Domestic Product (GDP) by sector 2012–2014 (at constant 2005 prices)*

Sectors	Change (%)			Share of GDP (%)			Contribution to GDP growth (in percentage points)		
	2012	2013 <sup>1</sup>	2014 <sup>2</sup>	2012	2013 <sup>1</sup>	2014 <sup>2</sup>	2012	2013 <sup>1</sup>	2014 <sup>2</sup>
Agriculture	1.0	2.7	3.0	7.3	7.2	7.0	0.1	0.2	0.2
Mining	1.4	2.2	3.1	8.4	8.2	8.1	0.1	0.2	0.3
Manufacturing	4.8	3.2	3.8	24.9	24.5	24.2	1.2	0.8	0.9
Construction	18.1	10.6	9.6	3.5	3.7	3.9	0.6	0.4	0.4
Services	6.4	5.5	5.7	54.6	55.0	55.4	3.5	3.0	3.1
Add. Import duties	15.6	9.6	4.0	1.3	4.0	1.4	0.2	0.1	0.1
<b>GDP</b>	5.6	4.5–5.5	5.0–5.5	100.0	100.0	100.0	5.6	4.5–5.0	5.0–5.5

Notes. Adapted from Department of Statistics and Ministry of Finance, Malaysia (2012). Note that total may not add due to rounding.

<sup>1</sup> Estimate; <sup>2</sup> Forecast

Unfortunately, the Job Central Malaysia's Work Happiness Survey in 2013 found that Malaysian engineers are categorised as unhappy workers (Boo Su-Lyn, 2014). Cited by Mat Desa (2009), the third quarterly report of the Malaysian Statistics of Human Resource Department (2008) indicated that the task and contextual performance levels of engineers in the electronics industry have dropped between 20% and 25% as compared with the previous year. Task performances are product knowledge, product design knowledge, and the ability to ensure that all designs have considered inputs from various counterparts, while contextual performances refer to time management, prompt decision making, assertiveness, and human relations such as volunteer work. Failure to meet task performance will cause engineers' overall performance measurement to drop significantly, which will eventually contribute to deficiencies in the final product. Other consequences are delayed project completion and failure to meet customer deadlines and requirements (Mat Desa, 2009). This scenario will likely worsen if little attention is paid to research on the engineer's well-being, making it important to assess the level of individual well-being among Malaysian engineers. Accordingly, the following research questions were posed to further examine the issue:

1. Does career goal development influence career satisfaction among Malaysian engineers?

2. Does career goal development influence psychological well-being among Malaysian engineers?

The remaining sections of this paper are organised as follows. The literature pertaining to the influence of career goal development on career satisfaction and psychological well-being is discussed, and the development of the hypotheses and framework for this study are fleshed out within the same section. Next, the empirical methods employed in this study will be explained. The findings section presents the results from the statistical tests performed in the previous section. The discussion of the findings will then follow. Finally, the conclusion of the study will end the paper.

## **LITERATURE REVIEW**

### **Career Satisfaction**

Career satisfaction is used as a subjective indicator of career success primarily because it reflects an individual's attitude towards his or her career based on a personal appraisal. This concept is aligned with the boundaryless career concept because of the considerable stress on an individual to define and assess career success. Career satisfaction is assessed either using a measurement of satisfaction in terms of global career success (Valcour & Tolbert, 2003) or using a measurement of satisfaction with respect to the intrinsic and extrinsic aspects of one's career, which includes pay, promotions, and developmental opportunities (Greenhaus et al., 1990; Judge, Cable, Boudreau, & Bretz, 1995; Turban & Dougherty, 1994). As indicated in the previous sentences, the boundaryless career concept demands a subjective career approach in which individuals can personally define and assess their career success.

Subjective measures of career success have become increasingly important (Arthur, Khapova, & Wilderom, 2005; Parker & Arthur, 2000), with career satisfaction being one of the most significant predictors of success. Therefore, this study focuses on employees' career satisfaction. In this paper, career satisfaction is primarily viewed in the context of job satisfaction. Therefore, job satisfaction is used as a variable that reflects an individual's perception as to whether his or her career fulfils career-related values, needs, and expectations (Callanan, 1989). However, although job satisfaction refers to a pleasurable or positive emotional state resulting from an appraisal of an individual's job or job-related experiences (Locke, 1976), career satisfaction reflects a person's positive emotional state that results from a personal evaluation of one's career or career-related experiences. In general, subjective career success is an individual's

feelings of accomplishment and satisfaction with his or her career (Judge et al., 1995). While assessing the subjective career success, individuals are also evaluating their own career success with reference to self-defined standards, needs, values, career stage, and aspirations (Betz & Fitzgerald, 1987; Gattiker & Larwood, 1988). Nevertheless, with few exceptions, the existing literature has exclusively used the term career satisfaction as a sole indicator of subjective career success (Judge et al., 1995).

### **Psychological Well-Being**

Psychological well-being is a subjective concept that has a closer connection with the quality of life. Campbell, Converse, and Rodgers (1976) have conceptualised quality of life as a composite measure of physical, mental, and social well-being, happiness, and satisfaction involving many situations such as health, marriage, family work, financial standing, education opportunities, self-esteem, creativity, and trust in others. The primary feature of subjective well-being includes a positive measure and global assessment of all aspects of a person's life.

Psychological well-being is about living a good life. It is a combination of feeling good and functioning effectively. In this study, psychological well-being is defined in terms of the overall effectiveness of an individual's psychological functioning (Berkman, 1971a). Sustainable well-being does not require individuals to feel good all the time; the experience of painful emotions such as disappointment, failure, and grief are normal parts of life (Berkman, 1971b). Being able to manage these negative or painful emotions is essential for long-term well-being (Diener, 1994). However, psychological well-being can be affected by negative emotions that are extreme or long-lasting and that interfere with a person's ability to function in daily life. According to Warr (1990), the concept of feeling good incorporates not only the positive emotions of happiness and contentment but also emotions such as interest, engagement, confidence, and affection. Psychologically, the concept of functioning effectively involves the development of an individual's potential including having some measure of control over one's life, having a sense of purpose such as working toward value goals, and experiencing positive relationships (Diener, Suh, Lucas, & Smith, 1999). There is a long tradition of theoretical and empirical research that emphasised the importance of psychological well-being. Pavot and Diener (1993) stated that over the years, researchers have primarily focused on identifying and defining the key features of the construct of psychological well-being. However, clarifying the structure of psychological well-being has neither been easy nor straightforward as evidenced by the multitude of terms used to describe the construct (e.g., emotional well-being, mental well-being, and affective well-being) and the various conceptual approaches that exist (Pavot & Diener, 1993).

For instance, Bradburn (1969) proposed that psychological well-being is determined by two independent dimensions, namely the positive and negative effects. According to Bradburn (1969) and Bradburn and Caplovitz (1965), an individual experiences a high level of psychological well-being to the extent that he or she has an excess of the positive effects over the negative. In other words, an individual's happiness or well-being is determined by the degree to which his life is dominated by pleasure over pain. Previously, Warr (1987, 1990) developed a model of affective well-being and mental health to guide research in occupational psychology. In his broad conceptual framework, Warr (1990) argued that affective well-being is a component of a person's overall mental health. Mental health is a broader concept and is assessed through three principal components: competence (a construct similar to self-efficacy), aspiration (a concept related to psychological growth or self-actualisation), and negative job carry-over (the extent to which job-related worries carry over into an individual's personal life). Warr (1990) argued that these elements collectively define a person's occupational mental health.

### **Career Goal Development**

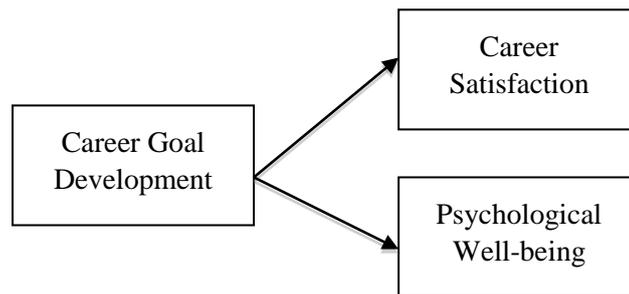
Career goal development refers to the goals that people pursue at work, such as promotions, pay increases, and skill development (Noe, 1996; Zikic & Klehe, 2006). Goals are the aims of a particular action or behaviour and can be set for any verifiable or measurable outcome. Locke's basic assumption is that goals are immediate regulators of human action. An individual synthesises direction, effort, and persistence to accomplish goals. To maximise goal setting, specific and challenging objectives are set to focus action and effort over time to accomplish tasks. Individuals must commit themselves to set goals that can produce results; the more difficult (as in challenging, yet reasonable) the goals are, the better the individual performs. Individuals need management support (feedback, reward mechanisms, and required resources such as time, training, and material goods) to maximise performance when applying goal setting.

Goal focus is defined as how certain someone is about his or her career goal or preferences for a specific occupation, job, or type of organisation (Stumpf, Colarelli, & Hartman, 1983). Goal focus may be an important determinant for developmental behaviour and willingness to participate in development activities and can also influence behaviour by facilitating the development of strategies to attain said goals (Locke, Shaw, Saari, & Latham, 1981). One strategy is for employees to engage in behaviours and activities designed to improve and strengthen their skills. The more focused their career goals are, the more likely they will be engaged in behaviours that will help them reach their objectives, and the greater their motivation will be to participate in development activities.

Locke and Latham (2006) elaborated that goals are related to the means of affecting the targets set as the primary standard that is to be satisfied with performance. Challenging goals are considered to be motivating because they require an individual to attain more rewards in order to be satisfied. Therefore, feelings of success in the workplace occur to the extent that people see that they are able to grow and meet job challenges by pursuing and attaining goals that are important and meaningful. Furthermore, Locke and Latham (2006) find that the key moderators of goal setting are feedback needed to track progress as well as personal commitment to the goal. This is enhanced by self-efficacy and the perception that the goal and task are important and complex, that task knowledge is harder to acquire on more complex tasks, and that there are situational constraints to overcome. Brown, Jones, and Leigh (2005) stated that excess work without the necessary resources to accomplish a task moderates goal effects and that goals affect performance only when overload is low.

### **Research Framework**

Figure 1 shows the proposed research framework, which consists of an independent variable (career goal development) and two dependent variables (career satisfaction and psychological well-being).



*Figure 1.* Research framework

Based on the above research framework, the following hypotheses were postulated:

- H1: Career goal development has a positive influence on career satisfaction.
- H2: Career goal development has a positive influence on psychological well-being.

## **METHODOLOGY**

### **Population and Sample Size**

The population chosen for this study are the professional engineers registered with the Board of Engineers Malaysia (BEM, 2002). As of June 2014, there were 11, 888 professional engineers in Malaysia ([www.bem.org.my/](http://www.bem.org.my/)). For determining the minimum sample size, this study follows Roscoe's (1975) rule of thumb, which states that "sample sizes larger than 30 and less than 500 are appropriate for most researchers". As such, 500 questionnaires were distributed to the respondents at the Institution of Engineers Malaysia (IEM). Judgement sampling was utilised as it involves the choice of subjects who are most advantageously placed or in the best position to provide the information required (Sekaran & Bougie, 2010). The professional engineers chosen were the ones that conformed to the inclusion criterion meaning that: (i) they have registered as professional engineers with the BEM and, (ii) they have accumulated at least 50 hours of Continuous Professional Development (CPD) activities in the year 2013.

### **Data Collection Procedure**

This study applied a self-administered questionnaire to collect data. As mentioned in the previous paragraph, the respondents in this study are professional engineers registered with the BEM. Because engineers are required to accumulate up to an average of 50 hours of CPD per year in order to renew their practicing certificate, participation in CPD activities is mandatory. CPD involves a systematic maintenance, improvement, and broadening of knowledge, skills, and development of personal qualities for the execution of professional and technical duties. CPD activities are organised by the IEM. As such, the researcher approached the IEM to seek its permission to distribute the questionnaires to professional engineers while conducting scheduled CPD activities. The questionnaires were distributed according to the scheduled activities. The scheduled activities were retrieved from the IEM's website. Data distribution was carried out from March 2014 to the end of April 2014. The list of CPD activities visited by the researcher for data collection purposes are summarised in Table 2.

**Table 2**  
*Tracking list of data distribution during the CPD activities*

No.	Activities	Venue	Date and time	No. of participants registered	<i>a</i>	<i>b</i>
1.	Talk on "Tools for debugging embedded system"	Wisma IEM	07 March 2014 (9.00 am–12.00 pm)	70	70	54
2.	Talk on "Collecting travel time and travel time reliability using Bluetooth data"	Wisma IEM	12 March 2014 (9.00 am–11.00 am)	70	70	61
3.	Talk on "Managing projects risks - Integrating social risks, threats, and opportunities in project planning"	Wisma IEM	20 March 2014 (9.00 am–11.00 am)	80	80	61
4.	One day course on health safety and the environment in the industry	Wisma IEM	07 April 2014 (8.00 am–5.30 pm)	60	60	53
5.	Talk on "Practising universal values and good work ethics by engineers"	Wisma IEM	16 April 2014 (9.00 am–11.00 am)	70	70	58
6.	Talk on "Fire insurance requires a site survey of the property"	Wisma IEM	19 June 2014 (5.30 pm–7.30 pm)	70	70	47
7.	Engineering Education Prestige Lecture Series on "Engineering education: Where are we heading to?"	Wisma IEM	24 April 2014 (9.00 am–1.00 pm)	80	80	53
<b>TOTAL</b>				<b>500</b>	<b>500</b>	<b>387</b>

Notes: *a* = No. of questionnaires distributed during the activities  
*b* = No. of questionnaires returned after the activities ended

## **Measures**

The measures were primarily adopted with an acceptable reliability. Scales developed by previous researchers (Noe, 1996; Zikic & Klehe, 2006) were used to measure the four aspects of career goal development. The Cronbach's alpha for career goal development was 0.83. Career satisfaction was then assessed by the five criteria developed by Greenhaus, Parasuraman and Wormley (1990). Respondents were asked to rate the criteria using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The Cronbach's alpha was 0.91 in this study. Finally, psychological well-being was measured using the 8-item Index of Psychological Well-Being developed by Berkman (1971a, 1971b). In this study, the coefficient alpha was 0.72. Ratings were made on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) for all of the variables in this study.

## **Data Analysis**

The data were analysed using the SmartPLS software developed by Ringle, Wende and Will (2005) with the Structural Equation Model (SEM) from the Partial Least Square (PLS) approach. PLS-SEM was preferred because of its many advantages in comparison with other first generation techniques. Some of its major advantages are as follows:

1. PLS makes fewer demands regarding the sample size compared to other methods
2. PLS does not require normally distributed input data
3. PLS can be applied to complex structural equation models with a large number of constructs
4. PLS can handle multiple dependent and independent variables in a single model

Moreover, PLS as a variance-based SEM is preferred because covariance-based SEMs assume that the observed measures have random error variance and measure-specific variance components, which are not of theoretical interest and are thus excluded from the measurement model. On the other hand, PLS-SEM assumes that the explanations of all observed measures of variance are useful.

## **FINDINGS**

### **Descriptive Findings**

This section presents the demographic profiles of the respondents. Of the respondents, 319 (82%) were male, while 68 (18%) were female. In terms of educational attainment, 212 (55%) obtained master's degrees, 147 (38%) had bachelor's degrees, and 28 (7%) held PhDs. All 387 respondents in this study were professional engineers (PE) registered with the BEM. In addition, all of the respondents in this study had collected more than 50 CPD hours for the year 2013. Table 3 summarises the demographic characteristics of the respondents.

Table 3  
*Demographic profile of respondents*

Demographics	Categories	Frequency	%
Gender	Male	319	82.0
	Female	68	18.0
Level of Education	Bachelor degree	147	38.0
	Master degree	212	55.0
	Doctoral degree	28	7.0
Registered as Professional Engineer (PE) with BEM	Yes	387	100.0
Total CPD hours collected for the year 2013	More than 50 hours	387	100.0

### **Model Testing**

To test the conceptual model of the study, this study uses a two-step approach suggested by Anderson and Gerbing (1988) and Chin (2010). This approach involves first analysing a measurement model and then a structural model. The measurement models are evaluated in terms of their validity and reliability, which are the two main criteria used for testing the appropriateness of the measures. After analysing the measurement model, the next step in PLS analysis is to analyse the structural model. The proposed structural model was tested to estimate the magnitude and significance of path coefficients and the overall model fit. Figure 2 shows the measurement mode, and Figure 3 shows the structural model.

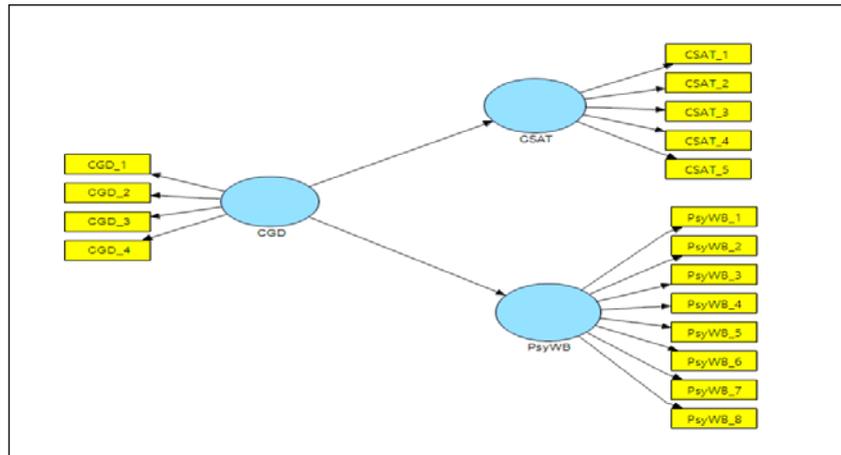


Figure 2. The measurement model

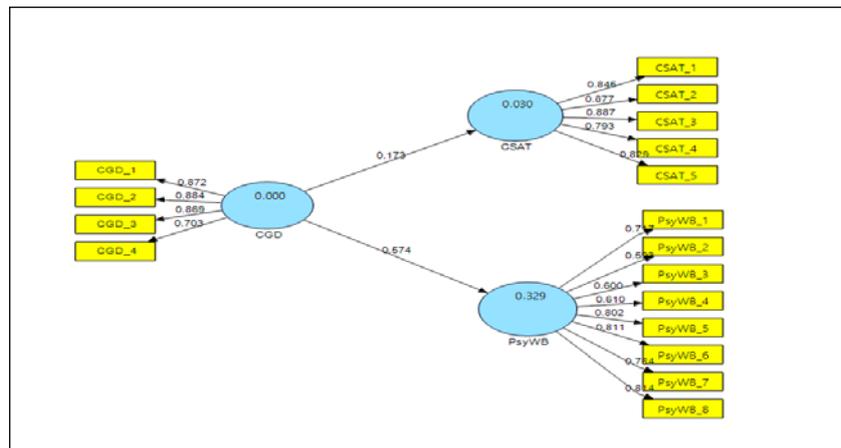


Figure 3. The structural

### Convergent Validity

As depicted in Table 4, cross-loadings, Average Variance Extracted (AVE) and composite reliability can be assessed to confirm convergent validity. AVE is the mean variance extracted for the items loading on a construct and is a summary indicator of convergence (Fornell & Larcker, 1981). An AVE value of at least 0.5 indicates sufficient convergent validity, meaning that the latent variable is able to explain more than half of the variance of its indicators on average (Goetz, Liehr-Gobbers, & Krafft, 2010).

Table 4  
Results of items reliability, internal consistency and convergent validity

Constructs	Items	Loadings	Composite Reliability (CR) <sup>a</sup>	Average Variance Extracted (AVE) <sup>b</sup>
Career goal development	CGD_1	0.872	0.902	0.698
	CGD_2	0.884		
	CGD_3	0.869		
	CGD_4	0.703		
Career satisfaction	CSAT_1	0.845	0.927	0.717
	CSAT_2	0.877		
	CSAT_3	0.887		
	CSAT_4	0.793		
	CSAT_5	0.829		
Psychological well-being	PsyWB_1	0.717	0.896	0.722
	PsyWB_2	0.593		
	PsyWB_3	0.600		
	PsyWB_4	0.610		
	PsyWB_5	0.802		
	PsyWB_6	0.811		
	PsyWB_7	0.784		
	PsyWB_8	0.814		

Note.

<sup>a</sup> Average variance extracted (AVE) = (summation of the square of the factor loadings) / (summation of the square of the factor loadings) / (summation of the error variances)}

<sup>b</sup> Composite reliability (CR) = (square of the summation of the factor loadings) / (square of the summation of the factor loadings) / (square of the summation of the error variances)}

Next, composite reliability is assessed for reliability, which is a measure of convergent validity. The composite reliability value should be higher than 0.7 to assure an accurate scale (Nunnally & Bernstein, 1994). Based on this guideline, the composite reliability values in Table 3 are satisfactory, and it can be concluded that the measures used provide a satisfactory level of reliability. The aforementioned results can be found in Table 3 and show that adequate evidence of convergent validity has been established. To confirm the construct validity, the results of discriminant validity will be discussed next. Table 3 illustrates the items loading, CR and AVE in this study.

### Discriminant Validity

Hair, Black, Babin and Anderson (2010) suggested that discriminant validity is the extent to which a construct is fully distinct from other constructs. It is investigated to indicate to what extent measures in the model are different from other measures within the same model. Discriminant validity is determined by comparing the square root of the AVE with the correlations between the other variables. Chin (2010) suggested that discriminant validity is established if the square root of the AVE exceeds the correlations. As depicted in Table 4, the square root of the AVE is placed on the diagonal. The values in Table 5 shows that the correlations for each construct are less than the square root of the AVE by the indicators measuring that construct, therefore indicating adequate discriminant validity. Based on the reported results, the measurement model confirmed the construct validity. We next proceed with hypothesis testing.

Table 5  
*Discriminant validity of the variables*

	Career Goal Development	Career Satisfaction	Psychological Well-Being
Career Goal Development	<b>0.835</b>		
Career Satisfaction	0.173	<b>0.847</b>	
Psychological Well- Being	0.574	0.016	<b>0.722</b>

*Note.* Diagonal values (in bold) represent the square root of the AVE, while off-diagonals represent the correlations.

### Hypothesis Testing

The relationships between the direct paths among the independent variable and dependent variables are discussed in this section. Two hypotheses were postulated for the relationship between career goal development and individual well-being as measured by career satisfaction and psychological well-being. Tests of the hypotheses findings indicated that both were supported. In other words, career goal development appears to have a positive influence on career satisfaction ( $\beta = 0.106, p < 0.1$ ), and career goal development was found to have a positive influence on psychological well-being ( $\beta = 0.352, p < 0.01$ ). These results are presented in Table 6.

Table 6  
*Path coefficient for career goal development and individual well-being*

H	Relationship	Path Coefficient ( $\beta$ )	SE	t-value	Decision
H1	CGD → CSAT	0.106	0.069	1.533*	Supported
H2	CGD → PsyWB	0.352	0.076	4.646***	Supported

Note: \*\*\* $p < 0.01$  (2.33), \*\* $p < 0.05$  (1.645), \* $p < 0.1$  (1.28)

## DISCUSSION

This paper began with an explanation of the main objectives of the study. The first objective is to investigate whether career goal development influences career satisfaction. The second objective is to investigate whether career goal development influences psychological well-being.

First, career goal development was found to have a positive influence on career satisfaction ( $\beta = 0.106$ ,  $p < 0.1$ ). This finding implies that career goal development affects career satisfaction. This result is in line with the earlier findings of past scholars such as Crant (2000), Lent (2005), Kuijpers, Schyns and Scheerens (2006), Seibert, Kraimer and Crant (2001), and Barnett and Bradley (2007). These authors opined that individuals who take proactive actions to achieve their career goals are more likely to experience career satisfaction. As mentioned earlier, the respondents in this study were professional engineers registered with the BEM. These individuals were initially registered as graduate engineers, and in order to upgrade their position to registered professionals, graduates need to: (a) satisfy the training requirements of the BEM, (b) pass the BEM's Professional Assessment Examination, and (c) accumulate an average of 50 hours of CPD activities conducted by the IEM per year. The fact that these individuals upgraded to the status of registered professional engineer makes it reasonable to assume that they were engaged in career goal development. By following the requirements set by the BEM, professional engineers have actually programmed their behaviour accordingly. For example, they established detailed career development plans, clarified how their position was related to career objectives, and, finally, set the objectives needed to realise their career goals. Therefore, by engaging in career goal development, engineers had more chances to get promoted and at the same time gain more career satisfaction. As a result, this study found that career goal development has a positive influence on career satisfaction.

Second, it was discovered that career goal development had a positive influence on psychological well-being ( $\beta = 0.352, p < 0.01$ ). This finding implies that individuals who have well-established and detailed career development plans often feel particularly excited or interested in their field. According to De Vos and Soens (2008), the more the employees focus on their career objectives, the more likely they will be engaged in behaviours that will help them reach their goals and will have more motivation to participate in development activities.

In the career literature, goal focus has been shown to be an important determinant of career goal attainment and satisfaction with career progress (Sugalski & Greenhaus, 1986). In this sense, career goals are expected to influence the level of an individual's psychological well-being. Previous studies stated that several factors have been consistently shown to be related to functional well-being related outcomes. Factors such as skill utilisation, professional development, and social support have also been shown to be related to engagement, job satisfaction, and health (Halbesleben, 2010). Therefore, the result of this new hypothesis test contributes to the literature with the finding that career goal development has a positive influence on psychological well-being.

## **CONCLUSION**

While the majority of the previous literature on psychological well-being has originated from western countries, this paper is one of the few studies that investigated the interaction between career goal development and psychological well-being in the Malaysian context. Specifically, this paper aims to contribute to the literature regarding the relationship between career goal development and individual well-being (as measured by career satisfaction and psychological well-being) for professional engineers in Malaysia. The findings of this study support the notion that career goal development influences career satisfaction and psychological well-being. This implies that professional engineers who are more likely to engage in career goal development are also more likely to be put more effort in managing their careers. This also indicates that engineers who are committed to an organisation do not frequently complain about their health.

In addition, the findings of this study encourage professional engineers to have a high level of career goal development so that they will be inspired to use or develop newly acquired skills to the fullest. The implication is that individuals will then find their jobs to be more meaningful and enjoyable. The findings also suggest that organisations need to revise their employees' key performance areas so that employees will feel that their own goals and expectations are aligned with that of their employers. In addition, organisations must provide opportunities that

allow engineers to fully use their acquired skills or to develop new ones. In conclusion, engineers are key players in the Malaysian economy, and they make a large contribution to the economic development of Malaysia. They also play a key role in wealth creation and help the country become an active player in the global economy. Although the government has placed considerable effort into promoting employee well-being, such research is still relatively new in the Malaysian context. Therefore, by highlighting career goal development as an important contributor towards individual well-being, this study calls for organisations and the Malaysian government to look into enhancing the well-being of professional engineers in order to improve their image, reputation and sustainability.

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